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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,362	11/20/2001	Mark Auch	12406-060US1/P2002,0611 U	1107
26181 7590 06/04/2007 FISH & RICHARDSON P.C. PO BOX 1022 MINNEAPOLIS, MN 55440-1022				
EXAMINER CLARK, JASMINE JHIHAN B				
ART UNIT 2815		PAPER NUMBER		
MAIL DATE 06/04/2007		DELIVERY MODE PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/989,362	<b>Applicant(s)</b> AUCH ET AL.	
	<b>Examiner</b> Jasmine J. Clark	<b>Art Unit</b> 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16, 24-26 and 56-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7, 12/1-12/7 is/are allowed.
- 6) ☒ Claim(s) 8-12/8, 12/9, 13/8, 13/9, 14-16, 24-26, 56-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/16/7</u> . | 6) <input type="checkbox"/> Other: _____  |

***Information Disclosure Statement***

1. The IDS filed 1/16/7 has been considered.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8, 9, 12/8, 12/9, 13/8, 13/9, 14-16, 24-26, 56, and 58-68 are rejected under 35 U.S.C. 102(b) as being anticipated by Hinata et al. (US 5,687,465), Applicants' submitted prior art.

Hinata '465 discloses a device, comprising a substrate 1 with a device region defined thereon; an active component (2 and 3) on a surface of the substrate in the device region; a cap 1 mounted on the substrate to form a package, the cap creating a cavity over the device region to seal the active component; and spherical shape (claims 14, 24, 63, and 66) spacer particles 4 fixed to the active component, the spacer particles preventing the cap from contacting the active component, wherein the spacer particles are coated with an adhesive layer. Note that the Examiner considered the spacer particles are being coated by the adhesive, because the two substrates 1 are bonded together by using an epoxy system adhesive, thus the particles are coated with an adhesive layer which is epoxy, eg., (see column 4, lines 12-25), whereas the epoxy is considered as a thermal curable material (claim 9).

Concerning claims 12/8, 12/9, 13/8, and 13/9, in reference to the recitation "[t]he spacer 4 are sprayed on the substrate by a wet spray process" (see column 4, line 15), the Examiner considered that the spacer particles 4 are randomly distributed in the device region, occupying both active and non-active regions.

Concerning claims 14-16, 25, and 26, for example wherein the spacer particles 4 comprise a spherical shape, wherein the spacer particles comprise a mean diameter to maintain height of the cavity between the cap and substrate 1; and wherein the spacer particles 4 comprise a density to maintain the cavity, please see Fig. 5, eg.

Concerning claim 56, Fig. 5, for example can also be read as follows: a device comprising: a substrate 1 with a device region (see above discussion); a seal member 5 serves as a sealing dam surrounding the device region; a cap 1 supported by the sealing dam 5; spacer particles 4 fixed to a surface of the device region to support the cap; a sealing region abutting an outer surface of the sealing dam 5; and an adhesive 13 located in the sealing region, the adhesive hermetically sealing the device region.

Concerning claims 58-60, since the spacer particle is coated with adhesive eg., epoxy resin (see above discussion), the Examiner considered that the spacer particles are comprises a non-conductive material.

Concerning claims 61 and 62, please see the above discussion under claims 12/8, 12/9, 13/8 and 13/9.

Concerning claims 63-68, please see the above discussion under claims 14-16, 25, and 26.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference as applied to claims 8, 9, 12/8, 12/9, 13/8, 13/9, 14-16, 24-26, 56, and 58-68 above, and further in view of Hiroshige et al. (US 6,309,502 B1) together with Yamakawa et al. (US 6,621,173 B1).

As per the above discussion, Hinata'465 discloses employing the adhesive made of epoxy resin, but fails to disclose wherein the adhesive layer comprises ultraviolet curable material and/or hot melt material. Hiroshige '502 discloses including an adhesive of epoxy resin which is an ultraviolet material (see column 4, lines 30+); and Yamakawa '173 discloses including an epoxy resin adhesive of a B-stage adhesive or a

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hot-melt adhesive (see column 3, lines 30+). Hence, it would have been obvious for Hinata '465 to employ the adhesive which comprises ultraviolet curable material and/or hot-melt material in a semiconductor device environment, for example, as is notoriously known.

4. Claims 1-7, and 12/1-12/7 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art(s) disclose and/or suggest wherein the active component includes an organic light emitting diode (OLED).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Telephone Inquiry Contacts***

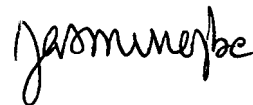
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasmine J. Clark whose telephone number is (571) 272-1726. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jjbc/5/25/7

**JASMINE CLARK**  
**PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to read 'Jasmine Clark', is written over the printed name.